

bridge Museum, as well as by all modern palæontologists. One thing therefore is certain, that whether or not our specimen be identical with that of Professor Hall, it has evidently no claims to be considered a *Lituites*. In the present note, however, we are unable to do more than announce the occurrence of the genus *Cryptoceras* in our Canadian rocks, the characters of the solitary specimen before us being too imperfect to warrant the bestowal of a specific name.

Since the above was written, we have learned that several examples of this fossil type, under the name of *Lituites undatus*, have been obtained by the Geological Survey of Canada from the Black River limestone of Lorette. It is very probable that many of the Silurian *Lituites* will prove, when more closely examined, to belong to *Cryptoceras*, or to Barrande's new genus *Nothoceras*, a notice of which (Bulletin de la Société Géol. de France, t. xiii. p. 380) has only just reached us. Although stated to have been read before the Society on the 3rd of March 1856, the Bulletin containing the notice was not issued until March in the present year. In *Nothoceras*, the bent edges of the septa (the *goulot* of the French palæontologists) protecting the siphuncle, instead of being deflected backwards as in *Nautilus*, *Cyrtoceras*, &c., are deflected forwards or towards the opening of the shell, as in the *Ammonites*.

Toronto, Canada West, July 1, 1857.

X.—*List of Coleoptera received from Old Calabar, on the West Coast of Africa.* By ANDREW MURRAY, Edinburgh.

[Continued from vol. xix. p. 461.]

Panagæidæ.

CRASPEDOPHORUS, Hope.

*Isotarsus*, Laferté.

1. *Cr. conicus*, mihi.

Niger, pilosus; thorace antice angustiore, postice latiore et ad basin truncato, punctato, lateribus rotundatis et postice elevatis; elytris magnis, punctato-striatis, maculis duabus flavis, altera antica transversa interstitia sex tegente, altera postica transversa interstitia quinque tegente.

Long. 8–9½ lin., lat. 4 lin.

Black, pilose. Head narrow, polished, margined, with an



elongate deeply-punctured fovea on each side from the eyes forward, a few scattered punctures on the raised vertex between these foveæ, behind which there is a transverse series of fainter punctures; a deep oblique puncture or line at the anterior angles. Labrum emarginate and pitchy-black. Palpi pitchy-black, with the terminal joints pilose; antennæ as long as half the body, black and pilose, slightly thicker in the middle than at either extremity; neck smooth and impunctate. Thorax narrowed in front, broadest behind the middle, truncate at the base, anterior angles meeting the neck, anterior margin between them nearly straight, very coarsely punctate, sparsely pilose; narrowly margined, and with a raised space within the margin, narrow in front, wider behind, on which the punctuation is fainter; an elongate fovea on each side at the base, and a minute tooth at the posterior angles, which are rounded and obtuse; no dorsal line. Scutellum minute. Elytra rather convex, broad, black, with two fulvous spots on each, one near the base, the other near the apex, both transverse; the coloured spaces not raised, nor of a different texture from the rest of the elytra; deeply punctate-striate, the punctures on the striæ transverse; interstices convex and punctured, pilose, the hairs black on the black parts of the elytra, fulvous on the fulvous spots; the anterior of these spots commences on the 3rd interstice, and is continued on the 4th, 5th, 6th, 7th and 8th interstices, the extent and form of the fulvous marking varying in different individuals; the posterior marking is confined to the 4th, 5th, 6th, 7th and 8th interstices; the 9th interstice and marginal space are not encroached on by the fulvous spots; the marginal space is marked by a series of cross-wrinkles rather than punctures; the apex is slightly emarginate, but not truncate. Under-side black, pilose, hairs piceous; prosternum sparsely and deeply punctate; inferior margin of thorax impunctate; sides of mesothorax and metathorax coarsely punctate; segments of abdomen finely and acicularly punctured, with some large, coarse punctures or foveæ on their sides; inflexed margin of elytra finely punctate. Legs black and pilose.

This species should be placed near the *Panagæus festivus* of Dejean. At first I supposed it to be the *Panagæus tropicus* of Hope, and I have distributed it among my correspondents under that name, but I am afraid I have been hasty in doing so. I have not seen Hope's species in nature; but Mr. Westwood's recent appointment to the curatorship of the Entomological Collection at Oxford (an appointment on which all entomologists must felicitate themselves) having rendered Mr. Hope's collection again useful to science, I have availed myself of his kindness to ascertain (so far as can be done without actual in-

spection of the insect itself) whether any of my species of *Craspedophorus* correspond with Hope's. Mr. Westwood's report confirms my doubt as to this species, although he observes that it is of the same general form, and, coupled with Hope's description, leads me to consider the two species distinct. His description is as follows:—"Long. lin. 8, lat. lin.  $3\frac{1}{2}$ . Niger; antennis atris, thorace semicirculari haud excavato, subdepresso et creberrime punctulato. Elytris sulcato-punctatis quatuor maculis subquadratis flavis pedibusque nigris. *Hab.* In Sierra Leone. This species has the two anterior spots covering six interstitial spaces, while the posterior cover only five\*." This description, so far as it goes, corresponds with my species, except that in mine the thorax cannot be called semicircular, or not excavated; it should rather be called conical, and it certainly is excavated, especially posteriorly. Mr. Westwood has furnished me with a sketch of the thorax of *tropicus*, which shows that it is more semicircular and shorter than in *conicus*. Hope's species also is somewhat smaller. The number of interstices over which the yellow spots extend (a particular which Mr. Hope gives as a good specific character throughout the genus) corresponds with that in his *tropicus*, excepting that the anterior marking sometimes covers the whole of the third interstice, at other times scarcely impinges on it at all; thus leaving it not quite clear whether it covers five or six interstitial spaces.

Fig. 2.

2. *Cr. strangulatus*, mihi.

Valde affinis præcedenti, sed thorace antice fortiter constricto; elytris punctato-striatis, maculis duabus flavis, singulis interstitia quinque tegentibus.

Long.  $7\frac{1}{2}$ – $8\frac{1}{2}$  lin., lat.  $3\frac{3}{4}$  lin.



Very closely allied to the preceding species, and the same description will answer for both, with the following exceptions.

This species is rather smaller. Its head is somewhat narrower. Its thorax is quite differently shaped, being narrow, constricted in front, and rather rapidly expanded behind; the posterior angles are obtuse, and not so much rounded as in *conicus*. The elytra are shorter, not quite so convex, and the interstices also are less convex; the fulvous markings are narrower, particularly the posterior spot, and the colour of the anterior spots does not encroach on the third interstice, and is thus confined to five instead of six interstices. The punctures

\* *Annals of Nat. Hist.* vol. x. (1842-3) p. 94.

on the interstices are somewhat coarser and less numerous, and seem to be rather more transverse.

In other respects the characters of the two species correspond. Their extreme similarity, except in the form of the thorax, suggests the idea that they may possibly be sexes of the same species. As the tarsi in this genus furnish no indication of the sex, I endeavoured to satisfy myself on this point by detaching the abdomen and dissecting out the sexual organs, which I found, although not very decipherable, to be at least exactly the same in both species. They would appear therefore not to be sexes of the same species. Neither do I think they can be varieties, the difference of form in the thorax being too great to allow of such a supposition. I should also mention that I have received specimens of *conicus* in several consignments, but *strangulatus* came only upon one occasion, and then in small numbers.

### 3. *Cr. arcuato-collis*, mihi.

Niger, pilosus, depressiusculus; capite latiore; thorace depresso, lateribus rotundatis, ad basin una et altera parte arcuato, profunde punctato, lateribus posticis lævioribus; elytris punctato-striatis, maculis duabus flavis, singulis interstitia quinque tegentibus, altera antica recte transversa, altera postica oblique transversa.

Long.  $7\frac{1}{2}$  lin., lat.  $3\frac{1}{2}$  lin.

Fig. 3.



Black, pilose. Head broad, polished, margined on each side in front of the eyes, very coarsely punctured over the whole surface of the head, except upon the clypeus, which is large, semicircular, and straight in front; it is less closely punctate on the neck; there are two not very deep depressions more closely punctate on each side in front. Labrum pitchy. Palpi ferruginous, terminal joints pilose. Antennæ not so long as half the body, filiform. Thorax somewhat quadrate, depressed, coarsely punctured, narrowest in front, sides rounded and margined, anterior angles rounded and projecting, posterior angles rounded-in, with a minute tooth caused by a small excision at the angle; basal margin arched on each side towards the angles, middle space nearly straight, projecting backwards in consequence of the arch on each side; dorsal line well marked; an inner depression a short distance within the lateral margin, following somewhat its line, nearest to it in front, diverging from it behind, more deeply punctate than the rest of the surface, behind joining a deep basal depression about half-way between the middle and the exterior angle, the basal depression not separated

from the margin by any raised space, very coarsely punctured. Scutellum small and smooth. Elytra rather depressed, not a great deal broader than thorax, punctate-striate; sides somewhat parallel and margined, black, with two rather transverse fulvous spots, the one near the base extending transversely across the 4th, 5th, 6th, 7th and 8th interstitial spaces, the other near the apex extending obliquely and transversely backwards over the same interstices; the spots pretty regular, but the colour on the 5th and 7th interstices most extended, particularly in the anterior spot; the coloured spaces not raised, nor of a different texture from the rest of the elytra; the interstices finely punctate, somewhat flattened on the disk, but very convex towards the sides; the marginal space marked with cross-punctures. Under-side black, pilose, hairs piceous; prosternum and breast deeply punctured, inferior margin of thorax impunctate; segments of abdomen finely aciculary punctured, with one or two deep foveæ or large punctures on the sides of the basal segments; inflexed margin of elytra almost impunctate. Legs black and pilose.

This species is allied to the *Cr. selenoderus* of Laferté, but may be at once known by its much greater size, it being fully a third larger.

#### 4. *Cr. Lafertei*, mihi.

Niger; thorace obcordato, ad basin truncato, angulis anticis rotundatis et projicientibus; elytris curtis, maculis duabus rufis, altera antica fere ad humerum posita et ad marginem attingente, interstitia quinque tegente; altera postica transversa, interstitia quatuor tegente.

Long.  $7\frac{1}{2}$ —8 lin., lat.  $3\frac{3}{4}$  lin.

Black. Head rather broad, closely covered with small punctures, which become confluent here and there, particularly in two foveæ on each side of the head; space in front (clypeus) impunctate, smooth and shining, with one large puncture on each side. Antennæ piceous, darkest at base. Palpi ferruginous. Thorax obcordate, very uniformly covered with punctures smaller than those in any of the preceding species, which become faint and disappear towards the margin near the posterior angles; the margins are expanded and very slightly reflexed, and at the anterior portion they have a narrow edging or border; anterior angles projecting and rounded-in to the neck, truncate at the base; posterior angles slightly projecting backwards, and with a slight exterior excision at the point; middle portion of base also very slightly projecting backwards; the dorsal line is distinct, except behind, and there is an elongate straight depression at

Fig. 4.



the base on each side. Scutellum triangular, with the sides slightly sinuate, smooth and impunctate. Elytra sparingly pilose, short, convex, and looking somewhat as if curtailed, punctate-striate, the striæ deep, particularly towards the apex, and with the interstices convex and punctate; marginal space with a distinct row of transverse punctures; two clear red or ferruginous spots on each elytron, the anterior reaching to the margin, and extending over the 5th, 6th, 7th, 8th and 9th interstitial spaces; this spot runs obliquely from the shoulder in the direction of the suture, is rounded opposite to it, and then returns in a slightly rounded line to the margin; the posterior spot is short and nearly transverse, and is confined to four interstitial spaces, the 5th, 6th, 7th and 8th, and is most prolonged on the 7th; the spots are of the same texture as the rest of the elytra, and are not raised above their surface; apex emarginate. Under-side with the prosternum and breast deeply punctured, the prosternum more sparsely than the breast; inferior margin of thorax shining, and with faint traces of punctures; inflexed margin of elytra finely punctate; sides of segments of abdomen coarsely punctate, less so towards the apex, middle portion finely aciculated. Legs pitchy-black, with tibiæ piceous and tarsi dark ferruginous.

I have named this species in honour of the Marquis de Laferté Senectère, who has published an able revision of the group on which we are at present occupied, and has been kind enough to give me the benefit of his information as to my new species.

5. *Cr. grossus*, Hope. Pl. XIII. fig. 8, in vol. xix. [June] of Annals.

*Panagæus grossus*, Hope, Ann. Nat. Hist. x. (1842) 94.

*Panagæus grandis*, Imh. Verhandl. d. Nat. Gesellsch. in Basel, v. p. 166.

“Niger; antennis atris; thorace fere hexagono, angulis anticis rotundatis, posticis abrupte truncatis, disco subconvexo punctato, lateribus parum depressis et marginatis; elytris sulcato-punctatis, quatuor maculis rubro-miniatis insignitis, corpore pedibusque nigris\*.”

Long. 11 lin., lat.  $4\frac{1}{2}$  lin.

I believe this species to be, as above stated, the *grossus* of Hope. His description, as is usual with him, is more concise than we could have wished; and I shall therefore add a somewhat more detailed description, although the admirable figure by M. Migneaux, which the reader will find in my last plate of Old Calabar species, renders any additional description scarcely necessary.

\* Hope in *loc. cit.*

Black. The head is impunctate, but finely rugose between the antennæ, with an elongate fovea on each side, in which the rugosities almost take the appearance of punctures. The antennæ are black and piceous towards the apex. The clypeus is smooth and elevated in the middle. The thorax may rather be described as truncate-cordate than as hexagonal, but as both the anterior and posterior portions of the lateral margins are somewhat straight, either expression may be used without being inconsistent with the truth; it is faintly and not very closely punctured, sparingly pilose, the margins reflexed, the dorsal line distinct, but reaching neither to the front nor the base; a deep longitudinal fovea is on each side of it at the base; the base is truncate, a broad space in the middle projecting very slightly backwards; the anterior angles are narrow, and project a little, and are rounded; the posterior angles are right-angled, and have the usual excised tooth. The scutellum is small and impunctate, and has the sides gently curved. The elytra are convex and obovate, pilose or pubescent, deeply punctate-striate, the punctures faint; the interstices are convex and finely punctate; the spots are red, with a tinge of vermilion; the anterior occupies four interstitial spaces (the 5th, 6th, 7th and 8th), and also the marginal space; but the raised margin itself (which is prominent) is not coloured; the posterior spot occupies the same striæ, but not the marginal space; the spots are of the same texture as the rest of the elytra, and are not raised. The marginal space might be called the last interstitial space, as it is broad and raised like the rest, but in addition to the fine punctation found in the interstitial spaces, it has a series of larger pits of various sizes, with a raised point in their middle. The hairs are piceous, except on the red spots, where they also are red; they are red on the under side of the body, which is sparsely punctured on the prosternum, breast, and sides of the segments of the abdomen (their middle portion being slightly aciculated). The tarsi are piceous.

6. *Cr. Erichsoni*, Hope.

Fig. 5.

Niger, rugose punctatus; thorace fere circulari, ad basin truncato et in medio retro projiciente, lateribus reflexis, rugose punctato; elytris punctato-striatis, maculis duabus parvis fulvis elevatis, singulis interstitia quatuor tegentibus.

Long. 8 lin., lat.  $3\frac{1}{4}$  lin.



Black. Head moderate rugosely punctate, with a longitudinal fovea on each side in front, and a smooth rounded elevation between them, margined on each side in front of the eyes. Palpi

nearly smooth. Thorax small, very deeply and coarsely punctate, on a hasty inspection appearing nearly circular, the anterior angles being rounded-in to the anterior margin, which is almost straight; the sides behind the middle sloping more rapidly to the posterior angles, which are obtuse and have a slight excision; base truncate at the sides, with the middle space (which is also truncate) abruptly projecting backwards, as in *Lebia*; margins broadly reflexed, more narrowly in front, the depression ending in a deep fovea on each side behind; the reflexed margins are punctate in the same way as the rest of the thorax, but the basal foveæ are nearly free from punctures; dorsal line almost imperceptible. Scutellum elongate triangular, impunctate. Elytra elongate, somewhat parallel, sparingly pilose, deeply punctate-striate; interstices convex, finely and sparsely punctate, the punctures both on the striæ and on the interstices are transverse, becoming towards the sides and on the marginal space almost transversely strigose; two yellow spots on each elytron, the anterior transverse, and about a fourth of the length of the elytra from the base, the posterior obliquely transverse and about a fourth from the apex: the spots are of a different texture from the rest of the surface, somewhat raised, glossy and lustrous, and nearly impunctate, and are placed on the 5th, 6th, 7th and 8th interstitial spaces; on the 6th projecting most forward, on the 7th most backward; apex slightly emarginate. Under-side with the prosternum and sides of breast coarsely punctate; inferior margins of thorax impunctate; sides of the segments of abdomen coarsely punctate, middle smooth, with aciculations; inflexed margin of elytra somewhat rugose. Coxæ punctured. Legs slender.

I learn from Mr. Westwood that this is Hope's *Erichsoni*, although, from his description, I should not have found it out. It is interesting from its approaching the New Holland species, *australis*, Dej., to which it bears considerable resemblance.

#### 7. *Cr. Symei*, mihi.

Niger vel brunneo-niger, pilosus; antennis ferrugineis; capite parum punctato; thorace fere hexagono, pone medium latiore, fortiter punctato, lateribus posterioribus testaceis et translucetibus, foveis elongatis duabus ad basin; elytris crenato-striatis, interstitiis leviter punctatis, maculis duabus testaceis, altera antica interstitia sex et marginem tegente, ad humerum ascendente, altera postica interstitia quinque tegente; pedibus testaceis.

Long.  $3\frac{1}{4}$  lin., lat.  $1\frac{1}{4}$  lin.

Of the form and facies of *Panagæus crux-major*, but smaller.



Black, or fuscous black, pilose; the pubescence or hairs testaceous. Antennæ and palpi ferruginous. Head punctate between the eyes; the clypeus smooth. Thorax somewhat hexagonal, truncate at base, the greatest breadth a little behind the middle, uniformly coarsely punctate, the margins a little expanded and reflexed posteriorly, and where expanded testaceous and semi-transparent; dorsal line faint, and on each side of it an elongate basal fovea; the middle of the base very slightly and abruptly projecting backwards. Scutellum small, smooth. Elytra somewhat elongate and parallel, crenate-striate, the interstices faintly punctate; two testaceous spots on each elytron, the anterior covering the whole interstitial spaces from the 4th to the raised and inflexed margin inclusive, anteriorly gradually ascending from the 4th till it reaches the 7th interstice, on which and the remaining portion of the side of the elytron the colour runs up to the base, where it turns in again upon the 6th and 5th, and posteriorly runs down a short space upon the 7th or 8th and the remaining lateral space; the posterior spot is narrower, and confined to the 4th, 5th, 6th, 7th and 8th interstices, being curved obliquely backwards. Under-side black; prosternum and breast coarsely punctate, and segments of the abdomen finely punctured, with a few coarser punctures on the sides. Legs testaceous.

I have dedicated this species to my friend Mr. John T. Syme, Lecturer on Botany in St. George's Hospital, London, a very able and zealous entomologist.

It is not without doubt that I have placed it in the genus *Craspedophorus* instead of in *Panagæus*. It has much more the appearance of *Panagæus crux-major*, *P. fasciatus*, &c., than of any of the *Craspedophori* with which I am acquainted, but none of the three specimens which I possess have the anterior tarsi dilated. It may be that they are all females, or it may be that the tarsi of the males are not dilated. In the absence of proof that they are dilated, I have kept this and the following species in this genus (of which the non-dilatation in the males is the essential character), notwithstanding that I cannot help thinking they more properly belong to *Panagæus*.

#### 8. *Cr. vicinus*, mihi.

Valde affinis præcedenti, et differt præcipue in macula antica non attingente marginem elytrorum.

Long.  $3\frac{3}{4}$  lin., lat.  $1\frac{1}{2}$  lin.

Very closely allied to the preceding species—possibly only a variety. It is rather larger, has the foveæ at the base of the thorax rather deeper and broader, and the testaceous or yellow markings on the elytra differently disposed. The anterior spot

does not reach the margin, being confined to the 4th, 5th, 6th, 7th and 8th interstitial spaces, the colour being shortest on the 5th and longest on the three last; the posterior spot is confined to the same interstices, almost disappearing on the last; it is more transverse and not so much curved obliquely backwards and outwards as in *Symeii*.

[To be continued.]

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XI.—Notes on the Indian species of *Lycium*.

By T. ANDERSON, Esq., M.D., Oude Contingent\*.

IN October 1855, when passing through the Doab between the Ravee and Beas, I gathered a specimen of *Lycium Edgeworthii* of Dunal, a species founded on a plant sent to Dunal by Mr. Edgeworth, from near Sirhind. The plant in my herbarium is evidently the same as that which Dunal has described; but after most careful and repeated examination of a considerable number of specimens in my possession, I am convinced that Dunal's *L. Edgeworthii* is only a variety of his *L. mediterraneum*, the *L. europæum* of Linnæus. In order that his species *L. mediterraneum* and *L. Edgeworthii* may be distinguished, he has refined their specific characters so much, that they appear to be the descriptions rather of trivial varieties than of permanent and well-marked species. The differences between the specific characters of the species consist of a line or two in the length of the calyx—a mark of no importance, of minute differences in the length of the pedicels and peduncles, and of inconstant characters taken from the existence of minute hairs at the insertion of the filaments in *Lycium Edgeworthii*. In my specimens I found several flowers entirely glabrous. In *Lycium europæum* the character is “filamentis basi puberulis.” Characters are also taken from the branches and spines, but the latter, in both species, are of all shapes and sizes, from a simple thorn  $\frac{1}{4}$  of an inch long to a spine 3 inches long, bearing leaves and flowers. Dunal supposes the colour of the corolla of *L. Edgeworthii* to be yellow; in my specimens it is pale rose-coloured, as in *L. europæum*.

Dunal has proposed to change the name of the Linnæan *L. europæum* to *L. mediterraneum*, a change by no means applicable to a plant widely diffused in India. I therefore retain the Linnæan name, and propose the following specific character, which seems applicable to both the Indian and Western plants.

**L. EUROPEUM**, fruticosum, cortice albido, ramis spinescentibus, spinis teretibus, foliis 2–5 ad basin spinarum fasciculatis, obovato-

\* From the Journal of the Asiatic Society of Bengal, No. I. 1857.